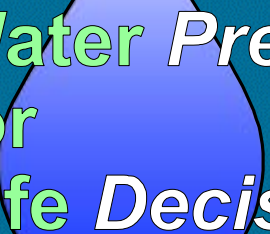


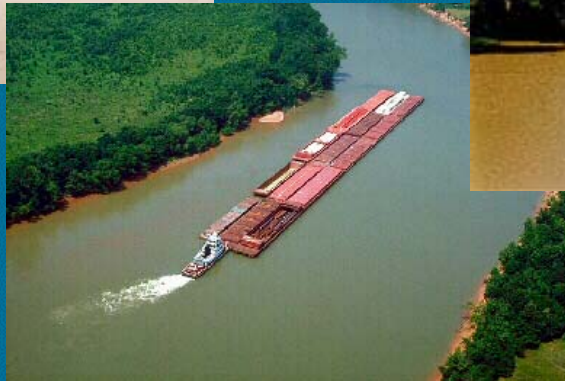
Advanced Hydrologic Prediction Service

AHPS



*Water Predictions
for
Life Decisions*

Overview



AHPS is the National Weather Service's frontline solution to provide improved river, flood and water information across America.

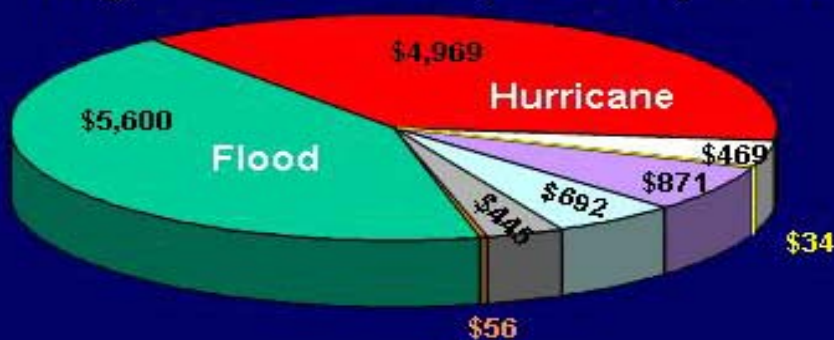
Disaster Losses

...Flooding is a significant cause

Average Annual Deaths (1990-99): 502



Average Annual Cost (1990-99): \$13.1 Billion



- Flood
- Hurricane
- Winter Storm
- Lightning
- Tornado
- Hail
- Cold
- Heat

AHPS Will Better Answer the Following Questions:

- How high will the river rise?
- When will the river reach its peak?
- Where will the flooding occur?
- How long will the flood last?
- How long will the drought continue?
- How certain is the forecast?

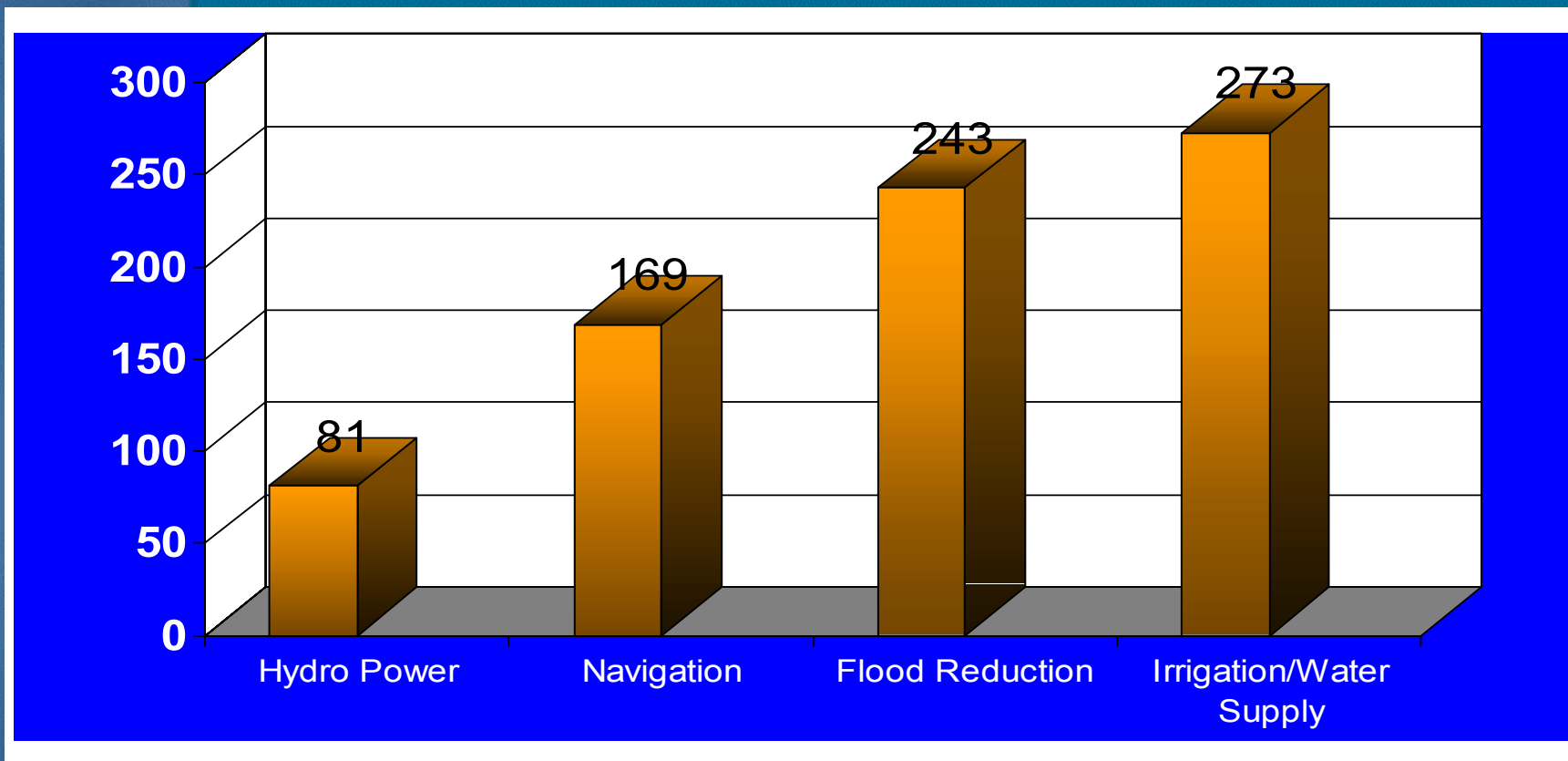
AHPS includes...

- More accurate forecasts over all time scales
- Increased warning lead time
- Longer forecast horizons
- Information to assist risk-based decision making
- Nationally consistent access to products and information
- Easier to use graphic products

\$766 million estimated annual recurring benefit

(National Hydrologic Warning Council study)

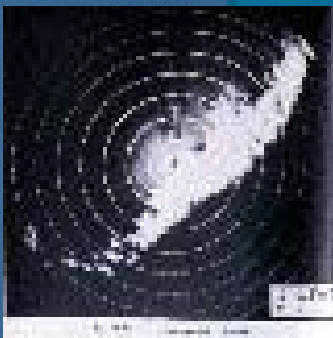
Annual Projected Benefits in Millions of Dollars



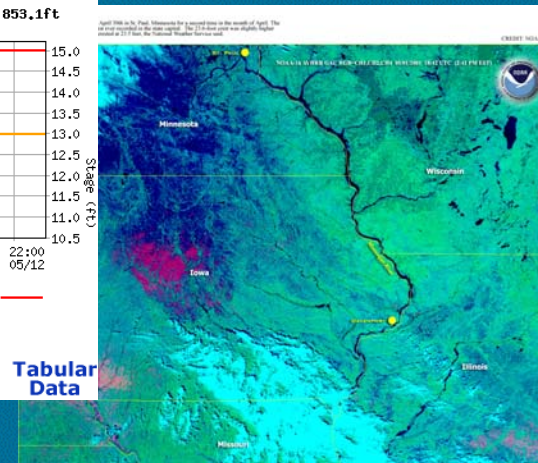
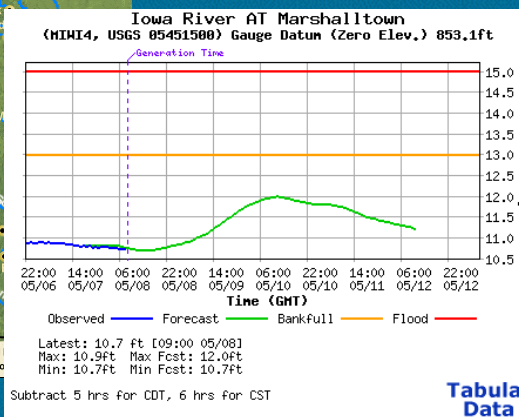
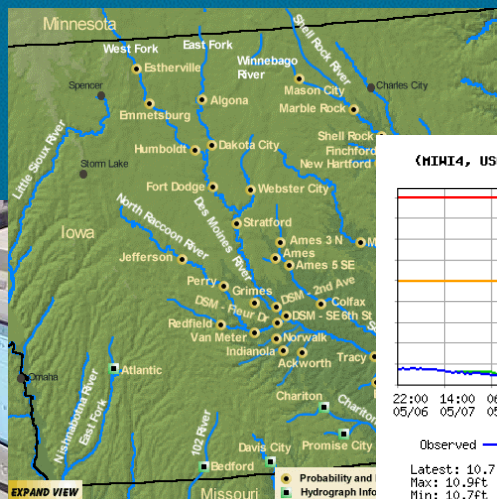
National Hydrologic Warning Council 2002 Report: "Use and Benefits of the NWS River and Flood Forecasts"

- AHPS service delivery levels
 - Basic
 - Long-term probability information
 - Enhanced river level or water supply forecasts
 - Full
 - Enhanced flash flood warnings
 - Short- and medium-term probability information
 - Low flow and drought products
 - With partnered data sets
 - Flood forecast maps





AHPS builds upon the National Weather Service's long history of around-the-clock forecasting excellence bridging past success with new sciences and technologies of the 21st century.



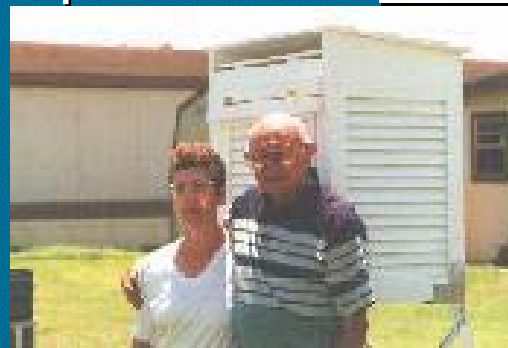
AHPS makes optimal use of a spectrum of Observing Tools



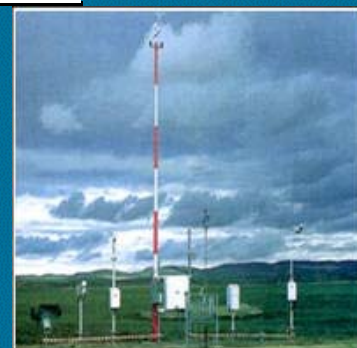
Geo-Stationary Satellite



Automated Rain Gages



Cooperative Observers



Automated Surface Observations



Stream Gages



SNOTEL

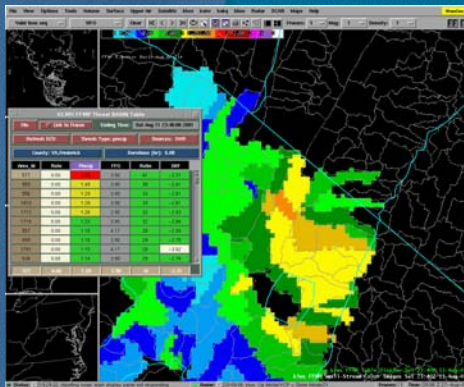


Remote Sensing



Doppler Radars

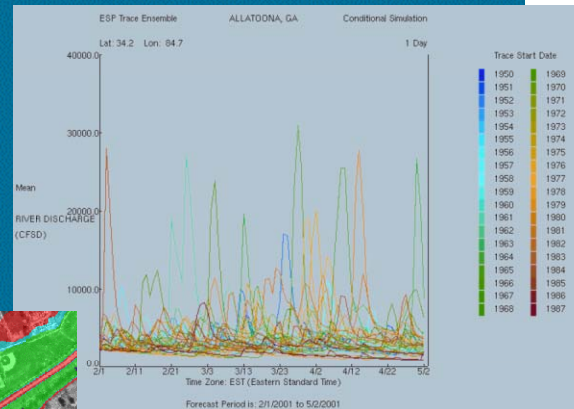
AHPS Includes State of the Science Forecasting Tools



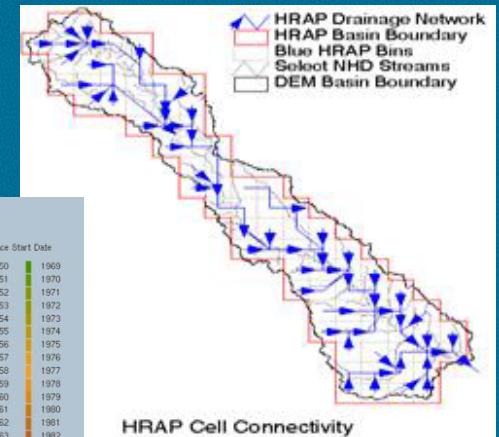
More Accurate Flash Flood
Monitoring and Prediction Radar Map
Lewistown, PA



Inundation Mapping

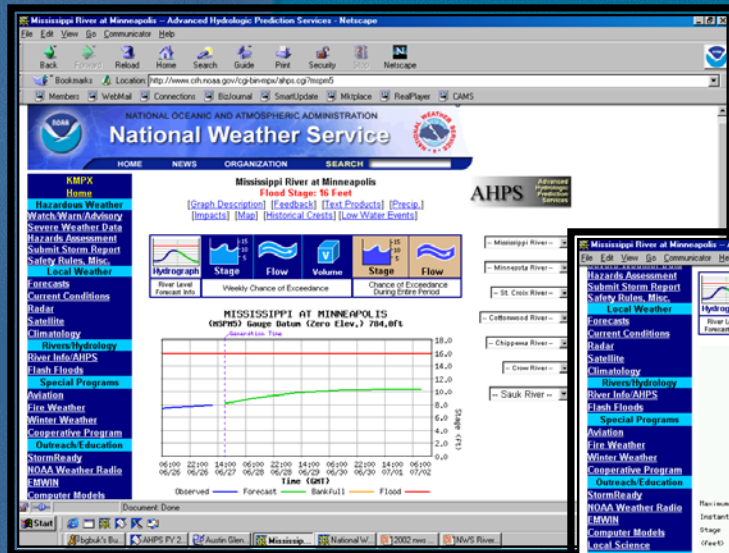


Ensemble Streamflow
Prediction

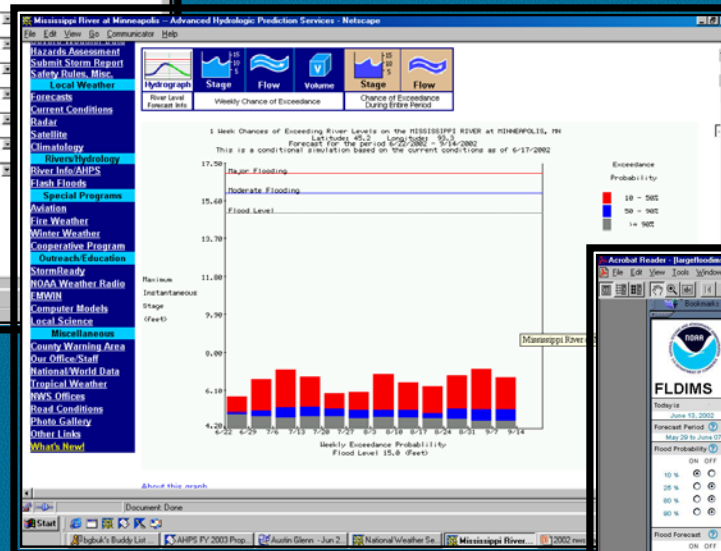


Distributed Hydrologic
Modeling

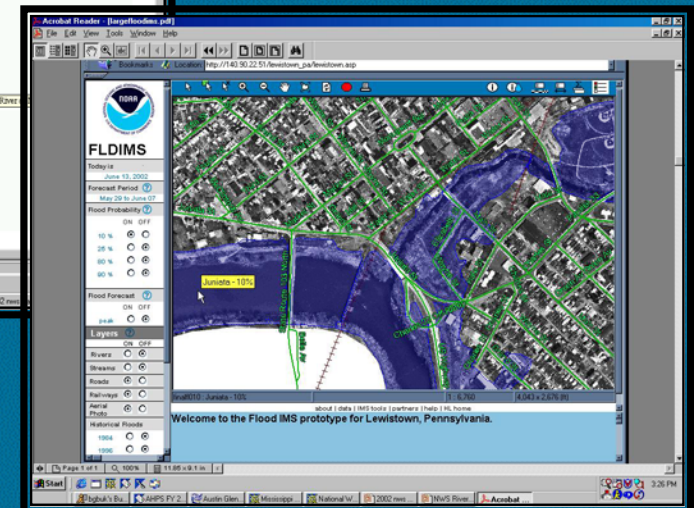
Hydrograph Product



Probabilistic Product



Flood Forecast Map





AHPS will better meet the hydrologic needs of the country and will enable the National Weather Service to increase forecast skill and flood and flash flood warning lead time.



AHPS provides emergency and water resource managers the information they need to make more informed risk-based decisions to optimize the use of their resources



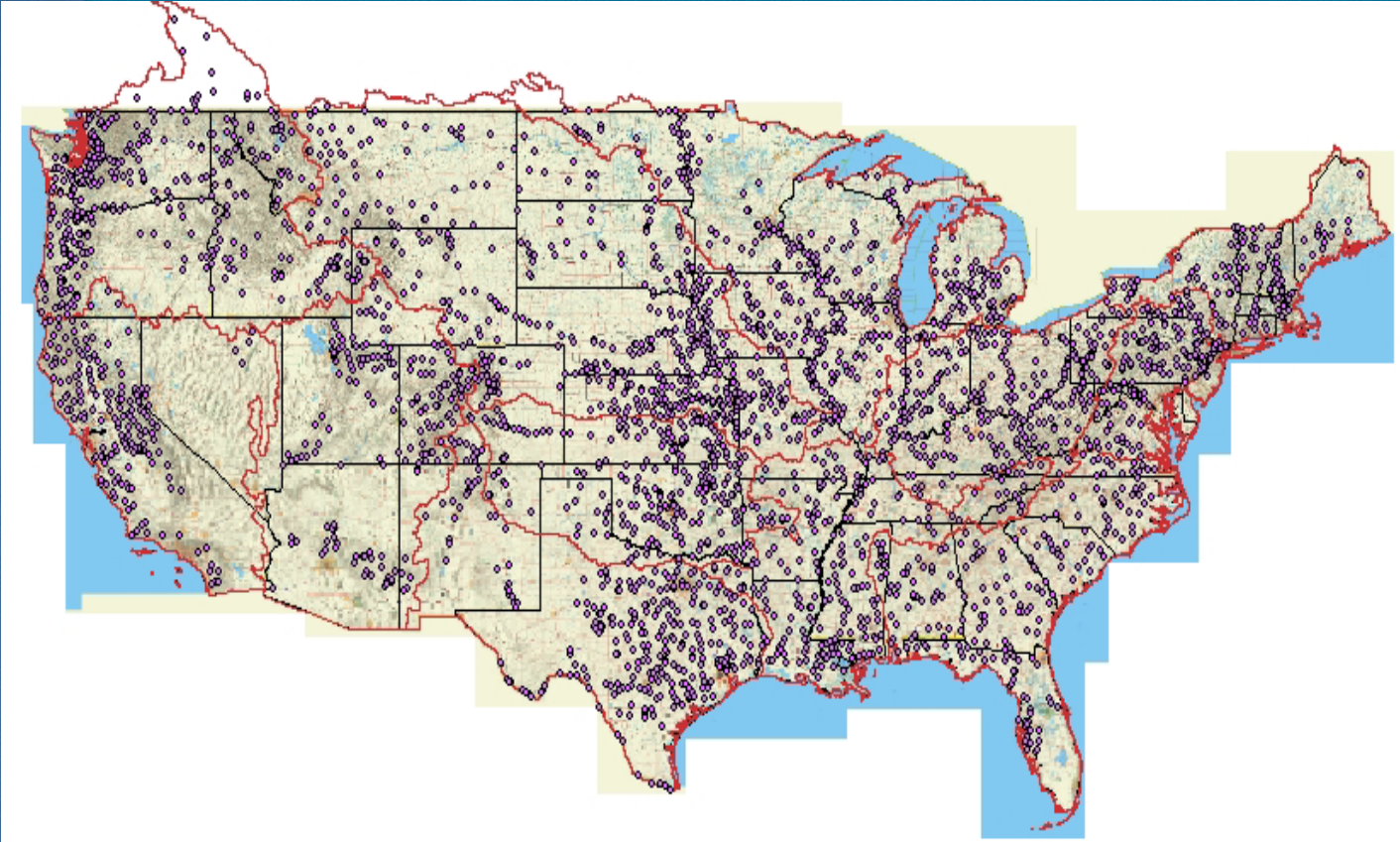
Folsom Reservoir, CA: *“AHPS forecasts would reduce flood damages by 79% when compared to non-AHPS forecasts.”*

National Hydrologic Warning Council 2002 Report: "Use and Benefits of the NWS River and Flood Forecasts"

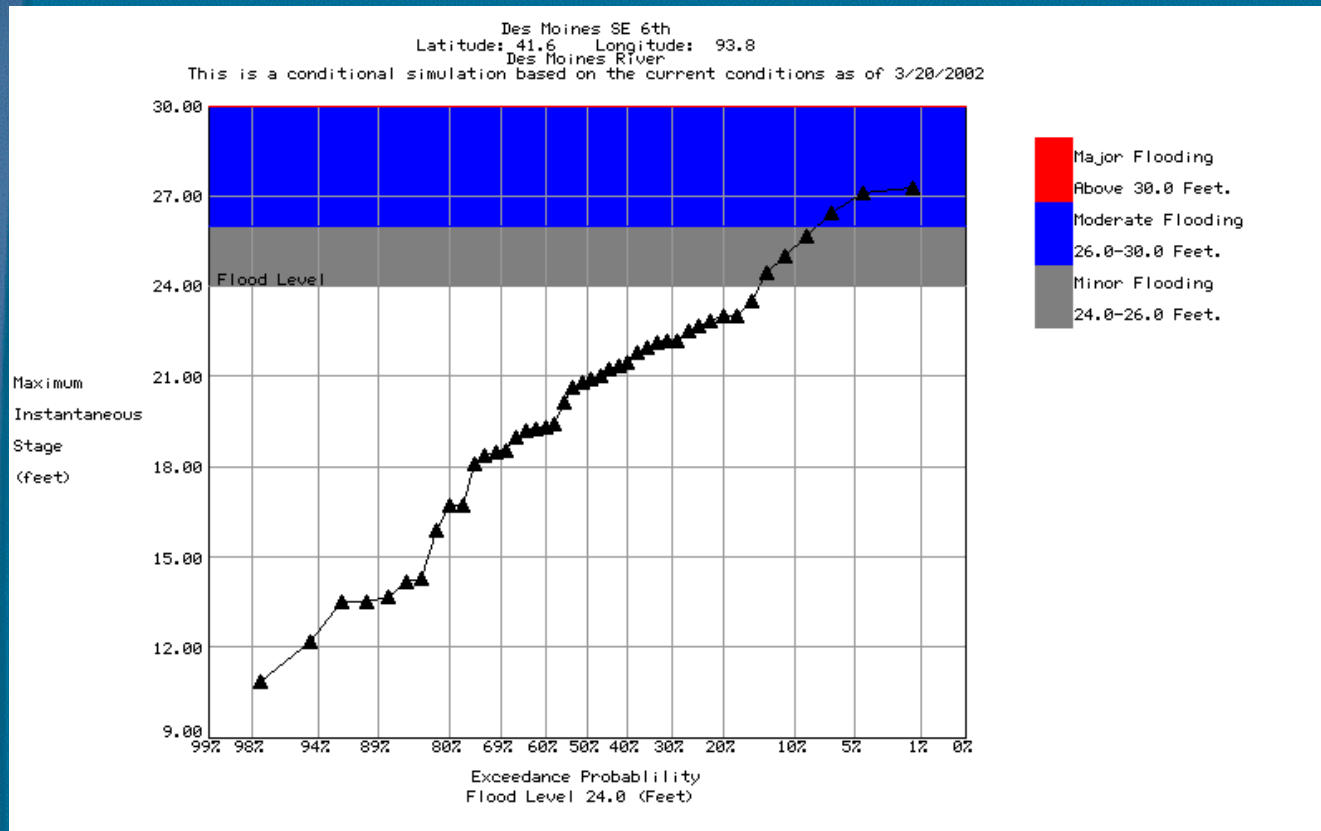


Saylorville Reservoir, Iowa: *“AHPS forecasts would reduce annual flood damages by 35% when compared to non-AHPS forecasts.”*

National Hydrologic Warning Council 2002 Report: "Use and Benefits of the NWS River and Flood Forecasts"



AHPS will improve hydrologic forecasts at thousands of locations nationwide



AHPS includes the likelihood a river will reach a specific height.

Lewistown, PA



AHPS includes flood forecast mapping in urban and other high impact areas...



... enabling emergency managers to be more proactive and “fight” a river against the ravages of a flood using a suite of easy to read graphical decisional tools.

Who benefits from AHPS?



Dam Operators

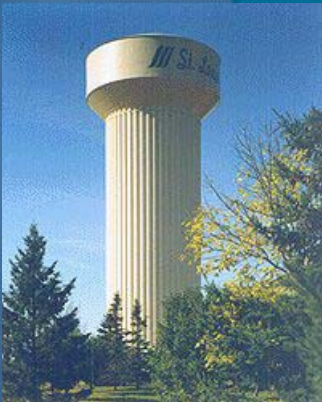


Farmers/Irrigators



Emergency Managers

America Benefits



Municipal Water Suppliers



Riverboat Pilots



Recreationists



AHPS enables the navigation community to better plan with confidence and optimize the efficiency of barge and shipping operations saving millions of dollars each year.



AHPS allows recreational users to stay out of harms way.

Because every minute counts...



...AHPS provides the information community leaders and business owners need to make better life and cost saving decisions about evacuating people or moving property before a flood occurs.



AHPS provides valuable water supply information to water resource managers.

What others are saying about AHPS



"It's a valuable emergency management tool. It gives us immediate, online information that helps us to do our job."

(Ellen Gordon – Administrator Iowa Emergency Management)

What others are saying about AHPS



“AHPS provides advantages not available before. During one flow event, AHPS forecasts provided the needed factor of safety to assure that the motors could be reinstalled in the (Mississippi River) locks and dams 48 hours in advance of original plans, saving the navigation industry \$300,000.” (William H. Koellner, retired water control chief of the U.S. Army Corps of Engineers District Office in Rock Island, Ill.)



**National
Safety
Council**



“We are committed to working closely with our partners and customers to ensure their hydrologic information needs are met.” (Greg Mandt, Director Office of Climate, Water and Weather Services)

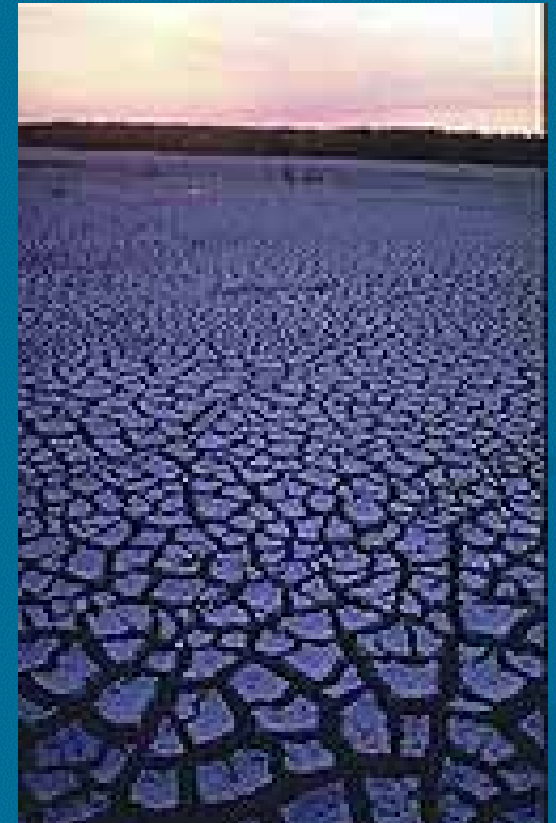


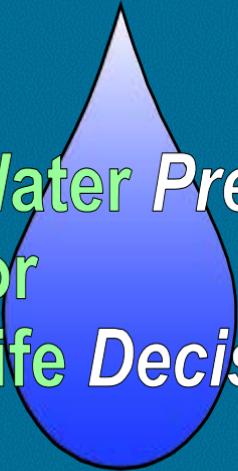


“Our commitment is to water-proof the nation and support the economy with the best water information science and technology has to offer.” (Glenn Austin, Chief of the NWS Hydrologic Services Division)



AHPS allows emergency managers and the river community to plan for and respond aggressively to the threat of floods, droughts and everything in between.





*Water Predictions
for
Life Decisions*

For more information: www.nws.noaa.gov/water

Email: hsd.ahps@noaa.gov